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Subject: Bloomberg (3-30) High Methane in Pennsylvania Water Deemed Safe by EPA

## High Methane in Pennsylvania Water Deemed Safe by EPA

By Mark Drajem - Mar 30, 2012

Tests by the Environmental Protection Agency of water in Dimock, <u>Pennsylvania</u>, found elevated levels of methane consistent with leakage from gas drilling nearby, according to scientists who reviewed the data.

Results from the first 11 wells tested by the EPA found one with a methane level of 52 parts per million, which could be explosive, and at least three others above the state standard of 7 milligrams per liter, according to Ronald Bishop, a chemist at the State University of New York's College at Oneonta.

The findings raise questions about the EPA's March 15 statement to Dimock residents that their water didn't pose a health risk, Bishop said.

"They sprang too early with these results, and in telling people their water is safe," Bishop said in an interview. "I'm used to seeing better from them."

Dimock, where actor Mark Ruffalo delivered water to residents late last year, is one of the most closely watched communities where residents say their water has been harmed by the hydraulic fracturing nearby by <u>Cabot Oil & Gas Corp. (COG)</u> Fracking is a process that injects water, sand and chemicals into deep shale formations to free trapped natural gas.

Methane, the key constituent of natural gas, and fracking gained prominence after a scene in the Academy Award-nominated documentary "Gasland" in which a resident near a gas-drilling site ignited the water coming out of a tap. A build-up of methane poses a risk of explosion.

One Dimock resident has said her water well exploded. Craig Sautner, a Dimock resident leading efforts against Cabot, has said he recorded a video showing gas from his well captured in a milk jug that he then lit on fire in his garage.

## 'More Methane'

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Two other scientists who have done their own research in the Dimock area say elevated levels of methane reported in the EPA analyses is a sign that natural gas from the Marcellus Shale is somehow migrating to the surface water table.

"These early <u>results</u> resemble what we <u>found</u> across the region -- more methane and dissolved gases in the water but little evidence of deep salts or fracking fluids," Rob Jackson, a professor of biology at the Nicholas School of the Environment at <u>Duke University</u>, said in an interview.

Cabot says that the gas is naturally occurring across Susquehanna County, where Dimock is located. It tested 2,000 water wells across the county and found 80 percent had pre- existing methane, said George Stark, a company spokesman.

"The rock under the Susquehanna is charged with natural gas," Stark said in an interview. "We're not surprised there is methane in the aquifer. It's naturally occurring and it's widespread."

## **EPA Test Case**

Dimock has been a test case for the EPA after state officials had settled with Cabot, and allowed the company to stop delivering water to residents there. The EPA initially pledged to send its own water to the town, and then reversed itself. A few days later it changed course again and said it would give water to a few households -- and test the water.

The EPA tested water in 60 homes and released a statement saying this month that data for 11 homes "did not show levels of contamination that could present a health concern." Then local residents shared their results with "Gasland" director Josh Fox, who sent them to scientists and reporters.

EPA officials set up meetings with residents yesterday and today to discuss the findings. The agency also posted the full <u>results</u> for those first 11 homes online, and is preparing to release results from other homes as they are ready.

## 'Blown up'

The EPA notified state and local officials after finding the one well with levels of methane exceeding 28 parts per million, which is the maximum amount of methane than can be dissolved in water before it will leave as a gas, said Terri White, a spokeswoman for the EPA in Philadelphia.

"Methane is not explosive while in solution," White said in an e-mail. "Methane in water does not impair the odor, taste or color, nor does it affect in anyway the potability of the water."

Bishop hypothesizes that the gas gurgling into wells may be kicking up mud that is leading to the unpleasant odor and taste residents such as Sautner complain about.

Robert Poreda, a professor of earth and environmental sciences at the <u>University of Rochester</u>, and his colleagues have tested their own 50 samples in the area since November and have found similar results to the EPA's, he said. Methane levels may be even higher than the agency's estimates, because the gas can escape if samples aren't drawn carefully, he said in an interview.

"If this were natural, why hasn't their house blown up?" he said.

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